

FINANCE AND AUDIT COMMITTEE

AGENDA REPORT

Subject: ST. ALBERT'S MUNICIPAL PRICE INDEX

Recommendation(s):

That The City of St. Albert's Municipal Price Index report be received as information.

Report:

In 2008, the City used a municipal price index of 6% for the 2009 budget process, this compares to;

- an Alberta consumer price index increase of 0.9% in the 12 months ending March 2009,
- an Edmonton construction price decrease of -12.2% in the 12 months ending February 2009, and
- a longer-term inflationary forecast for Canada of 2% by the Bank of Canada.

The 6% index was calculated by, and borrowed from, Strathcona County.

The attached report was prepared in response to a request to estimate the inflation rate for the City of St. Albert. In any given year, the municipality spends its budget on items such as labour, fuel, concrete, computers, contracted services and office furniture. Over time, it can be expected that the price of these goods and services will change. An increase in the average cost of the goods and services will result in an erosion of the City's purchasing power; whereas a reduction in the cost will improve the City's purchasing power. The report provides some background on the origins of the Municipal Price Index (MPI), explains the methodology used to develop St. Albert's own municipal index and provides the results and 3-year forecast for this unique financial indicator.

The Municipal Price Index is an indicator of what the forecasted municipal inflation might be. Although the index is unique to the City of St. Albert due to the weightings used to construct the inflation rate, the rates (price change increases or decreases, %) that are used consist of indices published by Statistics Canada and the Conference Board of Canada. These forecasted indices are widely published and are not the result of 'made-in-St. Albert' forecasts.

The MPI is intended to be a comparator or benchmark to the overall inflation that might be experienced by the City and should not be used as a target for future tax rate increases. In certain instances, the City might have constraints already built into the budget such as contracts that show a higher rate (increase) than that of the index used for those general accounts within the MPI (e.g. labour contracts.) Also, general municipal inflation would not include new business cases. Administration will be using MPI as a comparator for specific estimates when developing the budget. MPI will also be used by administration as a gauge when evaluating the base budget with respect to maintaining services.

Attachments:

1. The City of St. Albert's Municipal Price Index

Report Date	June 16, 2009
Author	Jason Labonté
Originating Department	Financial Services
General Manager Review	Dean Screpnek
Financial Review	N/A
Legislative Review	Chris Belke
Legal Review	N/A
City Manager Review	Bill Holtby

The City of St. Albert's Municipal Price Index¹

¹ **The report benefited significantly from the following documents & individuals;**

- a) The City of Calgary Corporate Inflation Rate – 2003 - 2008 : As measured by a municipal price index, January 6, 2009, by Patrick Walters, Corporate Economics, The City of Calgary, and
- b) 2009 Municipal Price Index, November 25, 2008, Filipa Reynolds, Finance Department, The City of Waterloo.
- c) Conference Board Economic Data, e-Data, <http://www2.conferenceboard.ca/weblinx/>, Matthew Stewart, Senior Economist, National Forecast and Custom Analysis Division The Conference Board of Canada.

1.0 Introduction

In 2008, the City used a municipal price index of 6% for the 2009 budget process, this compares to;

- an Alberta consumer price index increase of 0.9% in the 12 months ending March 2009,
- an Edmonton construction price decrease of -12.2% in the 12 months ending February 2009, and
- a longer-term inflationary forecast for Canada of 2% by the Bank of Canada.

The 6% index was calculated by, and borrowed from, Strathcona County.

This report is prepared in response to a request to estimate the inflation rate for the City of St. Albert. In any given year, the municipality spends its budget on items such as labour, fuel, concrete, computers, contracted services and office furniture. Over time, it can be expected that the price of these goods and services will change. An increase in the average cost of the goods and services will result in an erosion of the City's purchasing power; where as a reduction in the cost will improve the City's purchasing power.

2.0 The History and Purpose of MPIs

The calculation of Municipal Price Indices has been around as early as the 1970's when American City and County first published what they called the Municipal Cost Index (MCI) in September 1978. The MCI was designed to determine the rate of inflation of the cost of providing municipal services.

The Municipal Cost Index calculated by American City & County is a composite, or weighted average, of published indices in the USA. For example, the American City & County index is a weighted average of the following indices;

- Construction Cost Index, weighting factor 28%
- Building Cost Index, weighting factor 12%
- Consumer Price Index, weighting factor 32%
- Producer Price Index (all commodities), weighting factor 28%

Municipal Price Indices (MPI) are useful to local government managers in the following ways:

1. They provide an indication of historical, current and the future direction of prices relative to municipal expenditures;
2. They measure the increase in overall municipal expenditures attributable to inflation;
3. They measure and allow managers to more closely monitor the increase in expenditures by commodity category, thus making inflationary price increases or decrease more visible.

3.0 What is Inflation?

Inflation is the increase in the cost of goods and services that are normally purchased by the city to provide services. In other words, inflation is a function of the increase (or decrease) in costs to provide;

- Transportation services: roads, streets, sidewalks, lighting, public transportation
- Utilities: water, wastewater, storm water, solid waste
- Community & Family service: parks, recreation, libraries, museums, social services
- Protective Services: fire, police, bylaw enforcement
- Planning & Development: economic, land use, and building standards

The “basket of goods” that is consumed by a municipality as compared to an individual or a household is different. For this reason, the Consumer Price Index is not a good indicator, or substitute for, a Municipal Price Index. The basket of goods that a municipality typically consumes consists of the following goods and services.

- Labour costs,
- Contracted services to private companies and individuals,
- Payments and grants to community groups and organizations,
- Building maintenance costs,
- Operating costs and use of specialized equipment (snow ploughs, fire trucks, police vehicles, bucket trucks, street sweepers, sewer vacuums), and
- Specialized supplies and materials (road salt, gravel, etc).

4.0 Recommendation

The objective is to develop a methodology that calculates the change in the cost of the municipal basket of goods and services over time. In reviewing the concept of developing an MPI, the following three categories of expenditure are considered as having the greatest impact on municipal expenses.

- Labour, or the cost of labour settlements;
- Construction, or the cost of gravel, road construction & resurfacing, building construction, oil, steel, etc.; and
- Consumer goods, or the cost of commodities such as fuel, transportation, shelter, food and household goods and services.

It is recommended that the municipal price index for the City of St. Albert be a composite index of various price indices that are published by Statistics Canada and the Conference Board of Canada, which are weighted using actual operating and capital expenditures for 2007 and 2008.

5.0 Methodology

The first step will be to estimate the average cost increase of a fixed basket of goods and services and the second to compound the changes into a price index.

5.1 The Formula

Calculating the MPI is comprised of two parts: (1) the weights and (2) price (or cost) changes for different components of the baskets of goods and services. The weights show the importance of an item or group of items in the municipality's budget. Using weights to construct the inflation rate prevents overstating the influence of a given item in the municipal basket of goods and services. The inflation rate should therefore be viewed as a weighted average of relative price changes. The municipal inflation rate is therefore represented by the following equation:

$$\text{MPIR} = X_1 (W_1 / W) + X_2 (W_2 / W) + X_3 (W_3 / W) + \dots + X_N (W_N / W)$$

Where:

MPIR = Municipal inflation rate

X_1 = Price change for item 1

W_1 = Weight of item 1 in the municipal basket of goods and services

The above equation can be re-stated as:

$$\text{CCCIR} = \sum_{i=1 \dots N} X_i (W_i / W)$$

Source: The City of Calgary Corporate Inflation Rate – 2003 - 2008 : As measured by a municipal price index, January 6, 2009, by Patrick Walters, Corporate Economics, The City of Calgary

5.2 The Weights

The City's finances will be analyzed to determine a pattern of expenditures for a particular base period, such as 2007 and 2008. From this information the weights for each of the rates and indices identified in Section 5.3 a) to k) will be calculated. The information in Table 1 lists the City of St. Albert's MPI categories, the two-year average expenditure, and the weight for each category.

5.3 The Rates (or Price Changes)

The rates (or price changes) that are used to calculate the Municipal Price Index consist of both

- indices that are published by Statistics Canada and the Conference Board of Canada, and
- rates that are based on unique market or operational issues as identified below.

Realizing that no one price index alone adequately measures the City's inflation rate because the City's spending pattern differs from the average of each of the indices used, it is recommended the methodology described in the above formula be used that blends the various rates and

indices. Hence, it is recommended that a composite index be calculated to represent the City of St. Albert's MPI using the following rates and measures of inflation:

- a) Alberta Consumer Price Index,
- b) Alberta Wages & Salaries Index,
- c) Non-Residential Construction Index,
- d) Industry Product Price Index for Manufacturing,
- e) Industry Product Price Index for Machinery,
- f) Industry Product Price Index for Automobiles & Parts,
- g) Personal Consumption Deflator, Energy,
- h) Raw Materials Price Index for Crude Oil,
- i) New House Price Index, and
- j) Budgeted & forecasted increases (or decreases) in insurance rates.

Table 1		Thousands of Dollars (\$)			MPI Weighting (%)		
		Municipal Price Index (MPI) Sub-category	Fund 100 (Operating)	Fund 200 (Capital)	2007 & 2008 Average \$	Fund 100 (Operating)	Fund 200 (Capital)
10	Salaries & Benefits						
	10 Wages and Salaries - Regular (excluding benefits)	\$ 22,726	\$ 19	\$ 22,745	15.9%	0.0%	15.9%
	15 Wages and Salaries - IAFF (excluding benefits)	\$ 6,274	\$ -	\$ 6,274	4.4%	0.0%	4.4%
	20 Wages and Salaries - CUPE (excluding benefits)	\$ 7,201	\$ 70	\$ 7,271	5.0%	0.0%	5.1%
	25 Benefits	\$ 14,165	\$ 12	\$ 14,177	9.9%	0.0%	9.9%
		\$ 50,365	\$ 101	\$ 50,466	35.3%	0.1%	35.4%
20	Professional & Contracted Services						
	30 Professional Services	\$ 1,259	\$ 153	\$ 1,106	0.9%	-0.1%	0.8%
	35 Contracted Services	\$ 15,368	\$ 1,521	\$ 16,889	10.8%	1.1%	11.8%
		\$ 16,627	\$ 1,368	\$ 17,995	11.7%	1.0%	12.6%
30	Supplies & Services						
	40 Miscellaneous Supplies & Services	\$ 7,522	\$ 3	\$ 7,525	5.3%	0.0%	5.3%
	45 Insurance	\$ 1,102	\$ -	\$ 1,102	0.8%	0.0%	0.8%
	51 Materials & Commodities - Water, Wastewater & Solid Waste	\$ 7,501	\$ -	\$ 7,501	5.3%	0.0%	5.3%
	52 Materials & Commodities - Electricity	\$ 2,839	\$ -	\$ 2,839	2.0%	0.0%	2.0%
	53 Materials & Commodities - Gas, Oil, Antifreeze	\$ 1,599	\$ -	\$ 1,599	1.1%	0.0%	1.1%
	54 Materials & Commodities - Natural Gas	\$ 873	\$ -	\$ 873	0.6%	0.0%	0.6%
	59 Materials & Commodities - Other	\$ 1,452	\$ 292	\$ 1,744	1.0%	0.2%	1.2%
		\$ 22,888	\$ 295	\$ 23,183	16.0%	0.2%	16.2%
40	Transfers To Organizations & Individuals						
	55 Transfers To Organizations & Individuals	\$ 3,151	\$ -	\$ 3,151	2.2%	0.0%	2.2%
60	Capital & Equipment						
	70 Vehicle & Equipment Charges	\$ 4,129	\$ 3,366	\$ 7,496	2.9%	2.4%	5.3%
	75 Other Equipment Charges	\$ 469	\$ 1,512	\$ 1,981	0.3%	1.1%	1.4%
	80 Capital Costs	\$ -	\$ 32,770	\$ 32,770	0.0%	23.0%	23.0%
		\$ 4,598	\$ 37,649	\$ 42,247	3.2%	26.4%	29.6%
70	Land						
	85 Land	\$ 601	\$ 5,023	\$ 5,624	0.4%	3.5%	3.9%
	MPI Total	\$ 98,229	\$ 44,436	\$ 142,666	68.9%	31.1%	100.0%
50	Principal & Interest Payments						
	60 Principal Payments	\$ 4,467	\$ -	\$ 4,467			
	65 Interest Expense	\$ 3,798	\$ -	\$ 3,798			
		\$ 8,266	\$ -	\$ 8,266			
90	N/A transfers, accounting entries, etc						
	99 Transfers to from, Accounting Entries, etc	\$ 46,225	\$ 26,222	\$ 72,448			
	Agresso Total	\$ 152,720	\$ 70,659	\$ 223,379			

The MPI is a composite rate that is equal to the sum of the products of each rate multiplied by its respective weight. Table 1 below illustrates the average expenses for 2007 & 2008 by MPI Category, and the weights to be applied to the various index rates for each category.

Table 2 lists the weights and the source of the Price Index for each MPI Category.

Table 2			
MPI Cat.	Municipal Price Index (MPI) Sub-category	MPI Weighting (%)	Source of Index
10 Salaries & Benefits			
	10 Wages and Salaries - Regular (excluding benefits)	15.9%	Conference Board of Canada (CBOC) Series ID-RWRA Alberta Wages & Salaries
	15 Wages and Salaries - IAFF (excluding benefits)	4.4%	CBOC Series ID-RWRA Alberta Wages & Salaries
	20 Wages and Salaries - CUPE (excluding benefits)	5.1%	CBOC Series ID-RWRA Alberta Wages & Salaries
	25 Benefits	9.9%	CBOC Series ID-RWRA Alberta Wages & Salaries
20 Professional & Contracted Services			
	30 Professional Services	0.8%	CBOC Series ID-RWRA Alberta Wages & Salaries
	35 Contracted Services (Operating)	10.8%	CBOC Series ID-RWRA Alberta Wages & Salaries
	36 Contracted Services (Capital)	1.1%	CBOC Series ID-PINRB Non-Residential Construction
30 Supplies & Services			
	40 Miscellaneous Supplies & Services	5.3%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
	45 Insurance	0.8%	2009 to 2012 Budget Increase, assume 2013=2012
	51 Materials & Commodities - Water, Wastewater & Solid Waste	5.3%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
	52 Materials & Commodities - Electricity	2.0%	CBOC Series ID-PCENERG Personal Consumption Deflator, Energy
	53 Materials & Commodities - Gas, Oil, Antifreeze	1.1%	CBOC Series ID-PRMNO Raw Materials Prices, Crude Oil
	54 Materials & Commodities - Natural Gas	0.6%	CBOC Series ID-PCENERG Personal Consumption Deflator, Energy
	59 Materials & Commodities - Other	1.2%	CBOC Series ID-PISMAN Industry Product Prices, Manufacturing
40 Transfers To Organizations & Individuals			
	55 Transfers To Organizations & Individuals	2.2%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
60 Capital & Equipment			
	70 Vehicle & Equipment Charges	5.3%	CBOC Series ID-PISMV Industry Product Prices, Automobiles & Parts
	75 Other Equipment Charges	1.4%	CBOC Series ID-PISME Industry Product Prices, Machinery
	80 Capital Costs	23.0%	CBOC Series ID-PINRB Non-Residential Construction
70 Land			
	85 Land	3.9%	CBOC Series ID-PHNHPI New House Price Index
MPI Total		<u>100.0%</u>	

5.4 The Municipal Price Index

The price index will be set to 100 for 2008, to allow for a calculation of MPIs for 2009 to 2013. The yearly MPI will be equal to sum of the products of each weight and rate for each MPI category.

A calculation of the City of St. Albert's Municipal Price Index for 2010 to 2013 is presented in Table 3 below.

Table 3

MPI Cat.	Municipal Price Index (MPI) Sub-category	MPI Weighting (%)	Inflator for each Category				Source of Index
			2010	2011	2012	2013	
10 Salaries & Benefits							
	10 Wages, Salaries and Benefits	35.4%	3.6%	3.7%	3.8%	4.0%	Conference Board of Canada (CBOC) Series ID-RWRA Alberta Wages & Salaries
20 Professional & Contracted Services							
	30 Professional Services	0.8%	3.6%	3.7%	3.8%	4.0%	CBOC Series ID-RWRA Alberta Wages & Salaries
	35 Contracted Services (Operating)	10.8%	3.6%	3.7%	3.8%	4.0%	CBOC Series ID-RWRA Alberta Wages & Salaries
	36 Contracted Services (Capital)	1.1%	2.1%	3.3%	3.5%	3.2%	CBOC Series ID-PINRB Non-Residential Construction
30 Supplies & Services							
	40 Miscellaneous Supplies & Services	5.3%	2.6%	2.7%	2.4%	2.3%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
	45 Insurance	0.8%	14.5%	14.6%	14.6%	14.6%	2009 to 2012 Budget Increase, assume 2013=2012
	51 Materials & Commodities - Water, Wastewater & Solid Waste	5.3%	2.6%	2.7%	2.4%	2.3%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
	52 Materials & Commodities - Electricity	2.0%	3.6%	3.4%	3.7%	3.6%	CBOC Series ID-PCENERG Personal Consumption Deflator, Energy
	53 Materials & Commodities - Gas, Oil, Antifreeze	1.1%	22.7%	25.6%	19.8%	7.3%	CBOC Series ID-PRMNO Raw Materials Prices, Crude Oil
	54 Materials & Commodities - Natural Gas	0.6%	3.6%	3.4%	3.7%	3.6%	CBOC Series ID-PCENERG Personal Consumption Deflator, Energy
	59 Materials & Commodities - Other	1.2%	3.2%	3.6%	3.4%	2.6%	CBOC Series ID-PISMAN Industry Product Prices, Manufacturing
40 Transfers To Organizations & Individuals							
	55 Transfers To Organizations & Individuals	2.2%	2.6%	2.7%	2.4%	2.3%	CBOC Series ID-RPCPIA Alberta Consumer Price Index
60 Capital & Equipment							
	70 Vehicle & Equipment Charges	5.3%	2.2%	2.2%	2.1%	2.0%	CBOC Series ID-PISMV Industry Product Prices, Automobiles & Parts
	75 Other Equipment Charges	1.4%	2.5%	2.5%	2.3%	2.2%	CBOC Series ID-PISME Industry Product Prices, Machinery
	80 Capital Costs	23.0%	2.1%	3.3%	3.5%	3.2%	CBOC Series ID-PINRB Non-Residential Construction
70 Land							
	85 Land	3.9%	-0.6%	3.8%	3.9%	2.8%	CBOC Series ID-PHNHPI New House Price Index
MPI Total		100.0%	3.1%	3.7%	3.7%	3.5%	St. Albert's estimated Municipal Price Index